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(54) Title: ADJUVANT COMBINATIONS OF LIPOSOMES AND MYCOBACTERIAL LIPIDS FOR IMMUNIZATION COM-  
POSITIONS AND VACCINES

(57) Abstract: The present invention provides a vaccine adjuvant consisting of a combination of a surfactant i.e. dimethyldioctadecyl-  
lammonium-bromide/chloride (DDA) and a lipid extract from The present invention provides a vaccine adjuvant consisting of a com-  
bination of a surfactant i.e. dimethyldeoctadecylammonium-bromide/chloride (DDA) and a lipid extract from <The present invention  
provides a vaccine adjuvant consisting of a combination of a surfactant i.e. dimethyldeoctadecylammonium-bromide/chloride (DDA)  
and a lipid extract from *Mycobacterium bovis*. The present invention provides a vaccine adjuvant consisting of a combination of a  
surfactant i.e. dimethyldeoctadecylammonium-bromide/chloride (DDA) and a lipid extract from *Mycobacterium bovis* <The present  
invention provides a vaccine adjuvant consisting of a combination of a surfactant i.e. dimethyldeoctadecylammonium-bromide/chlo-  
ride (DDA) and a lipid extract from *Mycobacterium bovis* BCG The present invention provides a vaccine adjuvant consisting of a  
combination of a surfactant i.e. dimethyldeoctadecylammonium-bromide/chloride (DDA) and a lipid extract from *Mycobacterium*  
*bovis* BCG<The present invention provides a vaccin adjuvant consisting of a combination of a surfactant i.e. dimethyldeoctadecy-  
lammonium-bromide/chloride (DDA) and a lipid extract from *Mycobacterium bovis* BCG. The present invention provides a vaccine  
adjuvant consisting of a combination of a surfactant i.e. dimethyldeoctadecylammonium-bromide/chloride (DDA) and a lipid extract  
from <i>*Mycobacterium bovis* BCG<i>. <The present invention provides a vaccine adjuvant consisting of a combination of a sur-  
factant i.e. dimethyldeoctadecylammonium-bromide/chloride (DDA) and a lipid extract from <i>*Mycobacterium bovis* BCG<i>.  
The total lipid extract contains both apolar lipids, polar lipids, and lipids of intermediate polarity of which the apolar lipids were  
found to induce the most powerful immune responses. The total lipids may be extracted with chloroform/methanol and re-dissolved  
in water before the addition of surfactant. This preparation may be used to induce prominent cell-mediated immune responses in a  
mammal in order to combat pathogens, or as a treatment for cancer.

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